

REMARKS

Consideration of this application is requested in light of the above amendments and following remarks.

Status of the Claims

Claims 1-23 are pending in this application, among which claims 1-13 are withdrawn from consideration, i.e., claims 14-23 are currently under consideration. Claims 14-23 stand rejected. By this paper, claims 14 and 21 are amended. New claim 24 is added. No new matter has been added by this amendment.

Rejection under 35 U.S.C. §112

Claims 21 and 22 have been rejected under 35 U.S.C. §112, second paragraph, as being indefinite. The Office Action indicates that the term “second functional group” in claim 21 is confusing.

Claim 21 has been amended to read “...wherein the second functional group is introduced...”

Reconsideration and withdrawal of the rejection of claims 21 and 22 under 35 U.S.C. §112, second paragraph, is respectfully requested.

Rejection under 35 U.S.C. §102

Claims 14-17 and 19-23 have been rejected under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent No. 5,688,642 to Chrisey et al. (“Chrisey”).

Independent claim 14 has been amended for further clarification. Claim 14 is directed to a method of immobilizing a probe that is specifically bindable to a target substance to a solid phase carrier. In particular, the method of amended claim 14 recites, *inter alia*, “binding the first functional group of the probe and the second functional group of the immobilization substrate to

each other, ... wherein the first functional group and the second functional group are in the state of coupling without covalently bonding.”

One of the aspects of the present invention as featured in amended claim 14 is that the first functional group and the second functional group are in the state of coupling, without in the state of a covalent bonding. Since ionic bond is known to have weak bond strength, it had been apprehensive about peeling during hybridization. However, with the features of the present invention, a functional group is provided to the linker to be bonded to a probe and coupling between an acidic functional group and a basic functional group, not covalently bonding, thereby providing a sufficient immobilizing effect.

Chrisey discloses a method of attaching pre-formed hybridizable synthetic nucleic acid oligomers. In particular, Chrisey’s method includes covalent bonding using, e.g., using a heterobifunctional cross linker.

Accordingly, the invention of claim 14 as amended which requires a coupling without covalent bonding is different from the teachings of Chrisey which uses the covalent bonding, i.e., amended claim 14 is believed neither anticipated by nor rendered obvious in view of Chrisey for at least the reasons discussed above.

Reconsideration and withdrawal of the rejection of claim 14 under 35 U.S.C. §102(b) is respectfully requested.

Applicants have chosen in the interest of expediting prosecution of this patent application to distinguish the cited document from the pending claims as set forth above. These statements should not be regarded in any way as admissions that the cited documents are, in fact, prior art. Likewise, Applicants have chosen not to swear behind the documents cited by the office action or to otherwise submit evidence to traverse the rejection at this time. Applicants, however,

reserve the right, as provided by 37 C.F.R. §§ 1.131 and 1.132, to do so in the future as appropriate. Finally, Applicants have not specifically addressed the rejections of the dependent claims. Applicants respectfully submit that the independent claim, from which they depend, is in condition for allowance as set forth above. Accordingly, the dependent claims also are in condition for allowance. Applicants, however, reserve the right to address such rejections of the dependent claims in the future as appropriate.

New claim 24 has been added to recite the invention in an alternative manner. Claim 24 defines a plurality of probes each having a first functional group and an immobilization substrate having a plurality of second functional groups. Specifically, claim 24 recites similar features to claim 14 as discussed above, i.e., “each bond of the first functional group and the second functional group is in the state of coupling without covalently bonding.” Accordingly, new claim 24 is also believed patentable over the cited reference (i.e., Chrisey).

Applicants believe that the application as amended including the new claim is in condition for allowance and such action is respectfully requested.

AUTHORIZATION

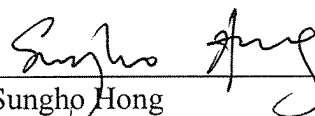
No petitions or additional fees are believed due for this amendment and/or any accompanying submissions. However, to the extent that any additional fees and/or petition is required, including a petition for extension of time, Applicants hereby petition the Commissioner to grant such petition, and hereby authorizes the Commissioner to charge any additional fees, including any fees which may be required for such petition, or credit any overpayment to Deposit Account No. 13-4500 (Order No. 1232-5579). A DUPLICATE COPY OF THIS SHEET IS ENCLOSED.

An early and favorable examination on the merits is respectfully requested.

Respectfully submitted,
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Dated: July 19, 2007

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